

Jagadeesh Kumar Maka

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Career Objective:

Adaptive Embedded Software Engineer with 3+ years of experience in developing embedded software design. Goal-oriented engineering skilled at software debugging and testing of the embedded systems. Seeking for a full time position which utilizes my skills while simultaneously offering continuous growth opportunities.

Work Experience:

JCI (Johnson Controls India): Working as Embedded Software Engineer from May 2021 to till date, Hyderabad.

Summary:

- Analysed existing code to identify areas of improvement, then optimized design and implementation of new features.
- Debugged existing code to identify issues and improve system performance.
- Good knowledge on C-language, C++ and System Programming.
- Hands on experience on Git tool.
- Experience on Daughter-card controlling (Ethernet and Power-G cards).
- Hands on Experience on PowerManagement Module.
- Hands on experience in handling adb and fastboot flashing.
- Hands on experience in checking memory leaks using valgrind tool.
- Practically did cross-compiling from linux to arm64 platform.
- Good knowledge on Embedded system programming.
- Hands on experience using Linux Commands in Terminal and Shell.
- Fixed and Resolved multiple bug issues as part of my regular work for monthly releases.
- Participates in Cross-functional project core teams and relays status to team members.
- Good at Self-Learning, Analytical and Interpersonal Skills.

Technical Skills:

- **Programming Languages:** C, C++ and DataStructures.
- **Debuggers:** GDB.
- **Operating Systems:** Ubuntu20.04.
- **TrackingTools:** JIRA.
- **Source and Version Control:** Git, Github.
- **Security:** Cyber security Upgrade.
- **Communication Protocols:** I2C, SPI, UART, TCP/IP, Basic knowledge on Matter Protocol.

Training and Certifications:

- Embedded Systems,
Vector India Institute, Bengaluru, India, March-2021.

Educational Qualification:

Bachelor of Technology, ECE,
Prakasam Engineering College, Prakasam, India, April-2020.

Professional Summary:

- Projects: IQ Panels (IQpanel 2+, IQ4NS and IQ5)
- Domain: Software Development.
- Duration: May 2021 to till date.
- Environment: Ubuntu
- Team Size: 3 members.

Project Description and Features:

IQ panels are security and smart home platform devices. They will serve as the "brain" of your home for many years to come. With them, we can control your lights, locks, thermostat, security and much more. We won't need a manual to operate your IQ Panels and also they will add to home's decor and make home smarter and more energy efficient!.

Bluetooth disarming, Built-in Glass Break Detector, Photo Frame, Live View and Live Answer, Disarm photos and videos, QuadSound Audio Streaming etc are the features of our panel.

PowerManagement:

Power management is one of the key features of any security device. It guarantees the device to be in working condition on battery for minimum required time. This is a must for panel system to pass ETL/UL certification. In Qolsys IQ panel 2, the power management feature is developed in native layer as a daemon which controls several other features of the panel to make it work on battery for at least 24 hours. Also Android has provided a native daemon(Healthd) which periodically polls the sysfs files for battery properties and notifies to the application services. Here our powersaver process also gets a notification of the battery properties.

MountOff Service:

Initial generation of panel onwards, we are experiencing partition corruption issues like going into Read-only mode especially data partition, in such cases panel/device won't respond to any actions. So, To overcome this type of issues we introduced this mountoff service, and this service job is to detect the read-only partition case and will reboot the panel, so after reboots done and simultaneously due to file-system checks, corrupted partitions will recover.

Basic Knowledge on Matter Protocol:

Matter Protocol is an open-source, unified connectivity standard for smart home devices, is designed to enhance interoperability across a wide range of products and ecosystems. It also enables secure, reliable communication between devices from different manufacturers, using common networking technologies such as Ethernet, Wi-Fi, and Thread. Matter aims to simplify smart home setups, improve device compatibility, and ensure long-term support for IoT (Internet of Things) products.

Responsibilities:

- Mainly involved in requirement analysis and implementation of new features.
- Involved in handling parent control features with optimized code for better security and fast performance.
- Developing testbinaries for checking the functionality of modules using C/C++ to run on linux.
- Involved in developing Qualcomm target boards bringup by enabling selinux for required kernel native services/modules.
- Developing a setup for testing the functionalities as support role for team requirement.

Declaration:

I hereby declare that the details furnished above are true and correct.

[JagadeeshKumar Maka]